

REMARKS

This application is a divisional of application U.S. Serial No. 09/232,469.

The amendment to the specification is made to provide a lineage, including proper reference to the International application of which this is a continuation-in-part (see MPEP § 1895.01) and to reference other applications and additional information. These changes were made in the parent application.

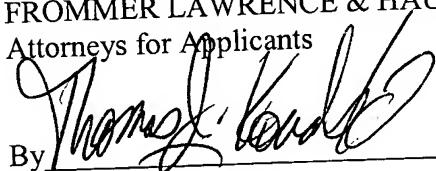
This Amendment cancels all the claims without prejudice or the intention creating estoppel and presents a new set of claims for the examination, which provide for the transdermal vaccinations of bovine by a needleless injector. Support for these new claims is found in the claims which they replace.

It is believed that no additional fee is due. If, however, a fee is due, please charge Deposit Account No. 50-0320.

An early examination on the merits is respectfully requested.

Respectfully submitted,

FROMMER LAWRENCE & HAUG LLP  
Attorneys for Applicants

By 

William S. Frommer  
Registration No. 25,506  
Thomas J. Kowalski  
Registration No. 32,147  
Mark W. Russell  
Registration No. 37,514  
(212) 588-0800

APPENDIX SHOWING AMENDMENTS TO THE SPECIFICATION

Amend the second paragraph so that it reads as follows:

Immunization and vaccination by direct administration of nucleotide sequences encoding an immunogenic protein (called DNA or polynucleotide vaccination) has been described in Patent Application WO-A-90 11092. The protein encoded by the inserted nucleotide sequence is capable of being expressed in the cells and of bringing about the development of an immune responses. (See also U.S. Patent Nos. 5,846,946, 5,620,896, 5,643,578, 5,580,589, 5,589,466, 5,693,622, and 5,703,055; Science, 259:1745-49, 1993; Robinson et al., seminars in IMMUNOLOGY, 9:271-83, 1997; Luke et al., J. Infect. Dis. 175(1):91-97, 1997; Norman et al., Vaccine, 15(8):801-803, 1997; Bourne et al., The Journal of Infectious Disease, 173:800-7, 1996; and, note that generally a plasmid for a vaccine or immunological composition can comprise DNA encoding an antigen operatively linked to regulatory sequences which control expression or expression and secretion of the antigen from a host cell, e.g., a mammalian cell; for instance, from upstream to downstream, DNA for a promoter, DNA for a eukaryotic leader peptide for secretion, DNA for the antigen, and DNA encoding a terminator.) This application envisages the use of naked DNA as well as of DNA contained in liposomes. Preferably, the DNA is introduced into the muscle. The DNA could also be introduced into the skin, into certain organs or into the blood, making it possible for the injection to be carried out in different ways such as the intradermal route, the transcutaneous route, the intravenous route and the like.